Catechol Mediated Intermolecular Carbohydrogenation of Terminal and Non-Terminal Alkenes

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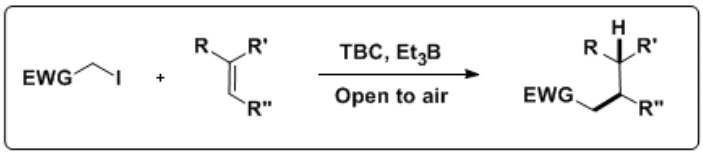
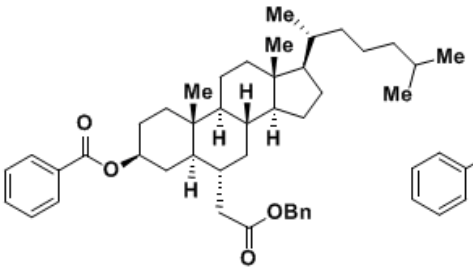
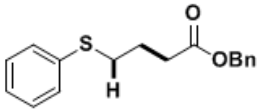
A few years ago, we have reported a radical chain reduction of organoboranes to alkanes with a very inexpensive 4-*tert*-butylcatechol under very mild conditions [1]. More recently, we have extended this procedure for the efficient deiodination of alkyl iodides with a mixture of 4-*tert*-butylcatechol and triethylborane [2]. Herein, we disclose that this reagent can be used for amazingly efficient carbohydrogenation of terminal and even non-terminal alkenes.

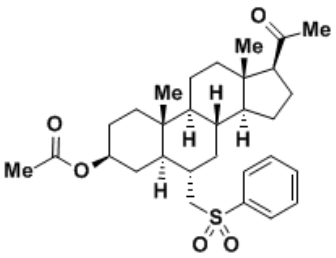




61 %
single diastereomer



98%
gram scale



64%
single diastereomer

[1] Giorgio Villa, Guillaume Povie, Philippe Renaud, J. Am. Chem. Soc, **2011**, 133, 5913-5920.
[2] Guillaume Povie, Leigh Ford, Davide Pozzi, Valentin Soulard, Giorgio Villa, *manuscript submitted.*